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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 28

Application Number: 08/605,628
Filing Date: 2/22/96, with priority date of 5/20/93
Appellant(s): Charles B. Simone

Jon D. Grossman
For Appellant

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Group 2700

EXAMINER'S ANSWER

This is in response to Appellant's brief on appeal filed December 15, 1997.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The Appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The Appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-8 stand or fall together because Appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

4,975,840

DeTORE at al.

12-1990

(10) *New Prior Art*

No new prior art has been applied in this Examiner's Answer.

(11) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-8 are rejected under 35 U.S.C. 101 and 103. The rejections which appear below are a repetition of the rejections made in the previous Office Actions (Paper Nos. 20 & 23). The text of those sections of Title 35 U.S. Code relied upon in the Examiner's Answer can be found in the Final Rejection (paper number 23; section 4, page 4 and section 6, page 9).

1. Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, namely an abstract idea and a mathematical algorithm.

(A) Claim 1 represents an abstract idea that does not provide a practical application within the technological arts.

The claim is directed to "evaluating insurability of at least one individual" and nominally recites the use of "a computer system" to implement a series of underlying method steps to be performed on nominal computer hardware (e.g., entry means, memory). Claim 1 is written in the "means-plus-function" format. However, the claimed means (e.g., means for assigning weight values, means for assigning risk values, means for determining, etc.) do not appear to correspond to a specific machine or manufacture disclosed within the instant specification and thus encompass any product of the class configured in any manner to perform the underlying process. In particular, the survey means is a database as recited at page 13, lines 1-7 of the specification. The means for assigning weight values, means for assigning risk values, means for determining a total value, evaluating means for comparing, and analyzing means are all software programs to be embodied within a general purpose computer (see page 12, lines 3-17 and page 13, line 12 to page 14, line 19 of the instant specification). The messaging means is a general purpose computer peripheral, such as a display device or printer, as recited at page 18, lines 6-12 of the instant specification, and appears to be used only when there are pre-defined suggestions for improving health and decreasing risk to be outputted to select individuals (i.e., note the language "for providing messages to at least such individual that contain said pre-defined suggestions" at lines 19-20 of claim 1, which implies that there are some individuals to which messages are NOT provided). Consequently, the claims, although within the technological arts, are not limited to a specific machine or manufacture.

However, although the claim is interpreted as being implemented on a computer or automated machine in a manner such that it is within the technological arts, claim 1 still

represents a non-statutory process in that no post-computer process activity is found. As the final element is a “communicating means for automatically communicating said level of insurance risk”, no manipulation of data representing physical objects is found, as the data processed (i.e., the “level of insurance risk”) within the instant claim is mathematical, and not physical, *per se*. As no physical transformation is performed, no practical application is found. Nor do any of the remaining dependent claims (i.e., claims 2-6) provide the necessary physical transformation to render the claims statutory.

The above deficiency may be cured by simply incorporating a final step that clearly represents a physical transformation of the data with post-computer process activity having a practical application provided there is clear support for such a recitation in the specification as originally filed.

Similar analysis holds for independent claim 7 and dependent claim 8, as well.

(B) Claims 1 and 7 also represent a solution to a purely mathematical problem that does not provide a practical application within the technological arts. As noted above, the claims are not limited to a specific machine or manufacture. Consequently, the claims are analyzed based upon the underlying process recited therein. The claims are directed to "evaluating insurability of at least one individual" and recite steps that are purely mathematical in nature (e.g., assigning weight values, assigning risk values, determining a total value, comparing each of said total values, determining level of insurance risk such that both a cost and an insurability profile is determined). The insurability profile is considered to be mathematical in nature in

that an embodiment of an insurability profile disclosed in the specification appears to be one of four quantitative ranges (see page 29, line 26 to page 30, line 15). Further, the steps of gathering information pertaining to an individuals' lifestyle, health, and medical tests; inputting gathered information; and receiving and storing gathered information, merely recite the necessary data gathering step required for computing the claimed mathematical functions. As the underlying final step claimed in claims 1 and 7, is merely "automatically communicating said level of insurance risk", it is not clear whether or not this step involves any post-computer process activity (e.g., whether it is performed outside the computer and having a practical application that possesses a "real-world" value), and is thus considered to be insignificant post-solution activity. As a result, it appears that the claims effectively recite a mathematical algorithm divorced from a practical application in the technological arts, despite nominal references within the claims and in the specification to a computer or other well-known computer-related structures (i.e., central processing unit, memory, input device, output device, databases, etc.).

Please see Section IV.B.2 (c) and (d) of the Examination Guidelines for Computer-Related Inventions, published on 2/28/96.

(C) Claims 2-6 and 8 incorporate the deficiencies of claims 1 and 7, respectively, through dependency, and are therefore rejected.

2. Claims 1-8 are rejected under 35 U.S.C. § 103 as being unpatentable over DeTore et al (4,975,840).

(A) As per claim 1, DeTore et al. disclose a computer system for evaluating a potentially insurable risk. The system comprises an application database which includes a survey for gathering information pertaining to an individual's health and medical test; an entry means for inputting the gathered information (fig. 1, element 16); a memory for receiving and storing the gathered information (fig. 1, element 12); and assigning weight and risk value to the stored information (col. 41, lines 48-64). DeTore et al. further disclose determining the total of weight and risk values and comparing the total values to the pre-defined values on the same claims (col. 42, lines 55-63) and a message or suggestion is provided for improving health and decreasing risk (col. 2, lines 31-38; cols. 19-22, "Treatment" section --shows that messages are provided to an individual having a medical problem, hypertension, as well as suggestions on how to improve their health conditions; and cols. 35-36). The system also determines the level of insurance risk and communicates the level of risk (col. 18, lines 11-32). DeTore et al. fail to recite that the information gathered from an individual also includes the lifestyle of that individual. However, many medical result are typically based upon the lifestyle of an individual. For example, certain behavioral patterns in lifestyle have a direct affect on an individual's medical status. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include lifestyle information as an independent category along with medical and health data gathered by the DeTore et al. system. The motivation to do so

would be to quantitatively assign weight and risk value to lifestyle data for the reason of accurately influencing insurance rates.

(B) Claim 2 recites the risk values are assigned negative values for actions that increase risks and positive values for actions that decrease insurance risks. However, it is well known to one of ordinary skill in the insurance risk evaluation art that positive and negative values to insurance risks is indicative of the strengths and liabilities of an individual's insurability.

(C) As per claim 3, DeTore et al. disclose a memory to store underwriter information (fig. 1, elements 24 and 26).

(D) As per claim 4, DeTore et al. disclose a questionnaire memory to store questionnaires and that an individual can select appropriate responses to lifestyle questions (col. 12, line 37 through col. 13, line 16).

(E) Claims 5-6 recite specific behavioral or lifestyle conditions of an individual such as the food intake of an individual, tobacco use, alcohol use, and an individual's pregnancy status. These are necessary information which are taken into consideration by an insurance agent. It would have been obvious to one of ordinary skill in the art to include's an individual's lifestyle information when buying insurance with the motivation of more accurately determining the insurable risk for that individual.

(F) Method claim 7 is similar in scope to system claim 1, and is therefore rejected under the same rationale given for claim 1.

(G) As per claim 8, DeTore et al. disclose that the gathering of information includes providing an individual with a questionnaire (col. 12, lines 62-66). It is obvious that, if a set of questions are provided to the individual, responses or answers should be received.

(12) *New Ground of Rejection*

This Examiner's answer does not contain any new ground of rejection.

(13) *Response to argument*

Examiner will address Appellant's arguments in sequence as they appear in the brief.

With respect to 101 Rejections:

(A) Appellant argues that the claims are "statutory computer claims" and relies on *In re Alappat* to show that computers operating pursuant to software can be patentable.

In response, the Examiner does not dispute that computers operating pursuant to software can be patentable, if claimed properly. However, the Examiner must respectfully point out that the court has not held that any claimed invention in which the Applicant makes use of computers operating pursuant to software automatically constitutes statutory subject matter and that the subject matter of *Alappat* involved vastly different subject matter than that

at issue in the instant invention. The claims in *Alappat* involved the transformation of physical signals (i.e., discrete waveform data samples into anti-aliased pixel illumination intensity data) while those at hand involve mere input and calculation of non-physical data (i.e., insurance risks, weights for gathered data). What that data is representative of is certainly relevant in determining whether or not claimed subject matter exists. Thus, in *Alappat*, it was the transformation of data from one physical form to another which avoided problems under 35 USC § 101, not merely the use of a computer program implemented on a computer. The Examiner directs attention to 33 USPQ2d 1194 at 1199 citing *Bradley*, 202 USPQ at 485:

“It is of course true that a modern digital computer manipulated data, usually in binary form, by performing mathematical operations, such as addition, subtraction, multiplication, division, or bit shifting, on the data.

But this is only *how* the computer does what it does, of importance is the significance of the data and their manipulation in the real world, i.e., *what* the computer is doing. It may represent the solution of the Pythagorean theorem, or a complex vector equation describing the behavior of a rocket in flight, in which case the computer is performing a mathematical algorithm and solving an equation.”

Thus, claims nominally reciting the use of computers operating pursuant to software do not automatically escape scrutiny under 35 USC 101.

Under the ruling by the *Donaldson* court, the Examiner must look to the specification in order to determine what is disclosed as support for means plus function language used in claims. If a programmed computer is disclosed then, of course, it would provide support for the appropriate means. However, the Examiner respectfully asserts that nominal recitation of a computer does not automatically transform otherwise nonstatutory subject matter into one that meets the requirements of 35 USC § 101.

Furthermore, the Examiner notes that it was the specific programming disclosed by

Alappat that the court held as the basis for their reasoning that a new machine was created. It was specifically stated that "We have held that such programming creates a new machine because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform a particular functions pursuant to instructions from program software." (emphasis added) *In re Alappat et al.*, 31 U.S.P.Q. 2d 1558(CAFC 1994). It is respectfully submitted that the above statement can not and should not be extrapolated to necessarily mean that any and every kind of computer programming for generating special data, in effect, creates a new process or machine. Whether or not subject matter is a "new machine" depends on whether or not the subject matter satisfies a careful analysis of the § 101 issue according to Supreme Court § 101 precedent. See *Johnson*, 502 F.2d 773, 183 USPQ 178-179.

(B) Appellant argues that claims 1 and 7 are statutory because they are process claims which recite pre-computer activity.

In response, the Examiner respectfully submits that all of the examples given in section IV.B.2(b)(i) of the Examination Guidelines for Computer-Related Inventions, published on 2/28/96, Federal Register (61 Fed. Reg. 7478)(hereinafter, "the Guidelines") of statutory claims that clearly recite "pre-computer activity" are either directed to physical waveforms or physical transformations of data signals outside of the computer into computer data (i.e., converting electrical signals and data representative of human cardiac activity into time segments; receiving Computerized Axial Tomography ("CAT") scan images; and converting

spherical seismic energy signals into electrical signals). Such claims are clearly distinguished from the claims presently pending in the instant application. In particular, the claimed invention appears to utilize a data processing device in the customary or nominal manner in which computers have been known to be used since their advent, namely, for the storing, calculating, and displaying of data. As per exemplary claim 1, the survey means is a database as recited at page 13, lines 1-7 of the specification. The means for assigning weight values, means for assigning risk values, means for determining a total value, evaluating means for comparing, and analyzing means are all software programs to be embodied within a general purpose computer (see page 12, lines 3-17 and page 13, line 12 to page 14, line 19 of the instant specification). The messaging means is a general purpose computer peripheral, such as a display device or printer, as recited at page 18, lines 6-12 of the instant specification. As such, there is no element (or underlying process step) within exemplary claim 1 that “requires the measurements of physical objects or activities to be transformed outside of the computer into computer data (*In re Gelnovatch* , 595 F.2d 32, 41 n.7, 201 USPQ 136, 145 n.7 (CCPA 1979) (data - gathering step did not measure physical phenomenon)), where the data comprises signals corresponding to physical objects or activities external to the computer system, and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities.(emphasis added) *Schrader*, 22 F.3d at 294, 30 USPQ2d at 1459 citing with approval *Arrhythmia*, 958 F.2d at 1058 - 59, 22 USPQ2d at 1037 - 38; *Abele*, 684 F.2d at 909, 214 USPQ at 688; *In re Taner*, 681 F.2d 787, 790, 214 USPQ 678, 681 (CCPA 1982)”. Thus, while the Examiner agrees that computer-related

inventions do not require pre- or post-computer process activity in order to be statutory, *per se*, the Examiner contends that Appellant's claims are clearly not directed to "pre-computer process activity" as clearly set forth in section IV.B.2(b)(i) of the Examination Guidelines, and thus the instant claims cannot be regarded as statutory subject matter under the "safe harbor" category.

(C) Appellant argues that claims 1 and 7 are statutory in that they are limited to a practical application in the technological arts.

In response, the Examiner respectfully submits that all of the examples given in section IV.B.2(b)(ii) of the Examination Guidelines for Computer-Related Inventions, published on 2/28/96, Federal Register (61 Fed. Reg. 7478)(hereinafter, "the Guidelines") of statutory claims that are "limited by the language in the claims to a practical application in the technological arts" are either directed to physical waveforms (i.e., digitally filtering noise) or explicitly recite physical transformation or interactions within specific computer structures (i.e., controlling transfer, storage, and retrieval of data between cache and hard disk storage devices such that the most frequently used data is readily available; controlling parallel processors...to maximize computing efficiency; making a word processor by storing...and executing...by changing the state of the computer's arithmetic logic unit...). Such claims are clearly distinguished from the claims presently pending in the instant application. In particular, the claimed invention appears to utilize a data processing device in the customary or nominal manner in which computers have been known to be used since their advent, namely,

for the storing, calculating, and displaying of data. As such, Appellant's claimed invention, while reciting a practical application of determining the insurability of an individual (thereby providing utility to the invention), is not by its recitations limited to a practical application in the technological arts, as no explicit recitations of the physical transformation or interactions within specific computer structures are provided which clearly denote the improvement over or utility of a computer or data processor aside from its routine use. Thus, while the Examiner agrees that computer-related inventions do not require pre- or post-computer process activity in order to be statutory, *per se*, the Examiner contends that Appellant's claims are clearly not "limited by the language in the claims to a practical application in the technological arts" in the manner set forth in section IV.B.2(b)(ii) of the Guidelines.

With respect to 103 rejections:

(A) Appellant argues that DeTore does not make an analysis based on an individual's all-around lifestyle, including both present and future effects, as recited at, for example, claim 1, lines 3-4, claim 6, and claim 7, lines 1-4.

In response, the Examiner respectfully submits that DeTore clearly teaches the gathering of personal data such as age, address, occupation, avocations, income level, etc.; the gathering of medical data such as prior medical problems, existing conditions, medications, etc; and the gathering of "any other information received from the applicant which may have a bearing on insurability" (DeTore; col. 4, lines 24-30). DeTore further discloses that the term "avocations" includes activities such as mountain climbing and that the terms "problems"

and/or “impairments” include smoking or drinking habits (DeTore; col.5, lines 31-32 & 40-57) as well as activities such as scuba diving or vehicle/motorcycle racing (DeTore; col. 10, lines 42-55). It is readily apparent that activities such as mountain climbing, scuba diving, vehicle/motorcycle racing, smoking and/or drinking alcohol may broadly be considered lifestyle choices or habits that clearly have a bearing on the insurability of an individual. As such, the above teachings DeTore would have suggested to the ordinarily skilled artisan at the time of the invention to include lifestyle questions for the reasons and motivations given in the rejections of the previous Office Actions, as such questions would have amounted to the gathering of “any other information received from the applicant which may have a bearing on insurability” (DeTore; col. 4, lines 29-30).

Moreover, the Examiner respectfully contends that the prior art may be properly evaluated for reasonable inferences which one skilled in the art would draw therefrom, and not just for their specific, express teachings. *In re Shepard*, 138 USPQ 148 (CCPA 1963). In *In re Jacoby*, 135 USPQ 317 (CCPA 1962), the court held that the skilled artisan is presumed to know something more about the art than only what is disclosed in the applied references.

Further, it is respectfully submitted that the Examiner has clearly meet his burden of establishing a *prima facie* case of obviousness under the statute. References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures, *In re Bozek*, 163 USPQ 545 (CCPA 1969). The issue of obviousness is not determined by what the references expressly state but by what they would reasonably suggest to one of ordinary skill in the art, as supported by decisions in *In re DeLisle* 406 Fed 1326, 160 USPQ 806; and *In re*

Kell, Terry and Davies 208 USPQ 871. Further, it was determined in *In re Lamberti et al*, 192 USPQ 278 (CCPA) that:

- (i) obviousness does not require absolute predictability;
- (ii) non-preferred embodiments of prior art must also be considered; and
- (iii) the question is not express teaching of references, but what they would suggest.

In view of the above, it is respectfully submitted that an explanation based on logic and sound scientific reasoning of one ordinarily skilled in the art at the time of the invention that support a holding of obviousness has been adequately provided by the motivations and reasons indicated by the Examiner given within the previous Office Actions, *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter., 4/22/93).

In addition, the Examiner respectfully submits that the disputed nexus between the survey means (claim 1), gathering information about tobacco use, alcohol use, and food intake (claim 6), and the step of gathering information pertaining to lifestyle, health, and medical tests (claim 7), to “an analysis based on an individual’s all-around lifestyle, including both present and future effects” is tenuous, at best. Although Appellant argues that DeTore’s tracking of activities such as mountain climbing, scuba diving, vehicle/motorcycle racing, smoking and/or drinking alcohol is merely the tracking of “risky behaviors”, Appellant does not point to any specific language within the claims wherein the term “lifestyle” is limited to behaviors other than risky behaviors, thereby positively and definitely eliminating such an interpretation of the disputed term. And while Appellant relies on a particular portion of the instant specification (page 17, lines 3-9) to show that the gathering of information “pertaining

to [one's] lifestyle, health, and medical tests" includes, among other things "(1) personal information, (2) geography, (3) occupation, (4) personal nutrition, (5) past nutrition, (6) height and weight, (7) tobacco use, (8) alcohol use, (9) hormonal factor, (10) exercise, (11) stress, (12) radiation and chemicals, (13) personal history, (14) drug use, (15) family history, (16) safety, (17) medical information, and (18) pets", it is respectfully noted that these aforementioned features, upon which Appellant relies, are not expressly recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As the word that is used in the claims (i.e., "lifestyle") was not defined in the specification to require such limitations, a reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to disputed terms. In addition, the Examiner respectfully submits that Appellant's statements quoted above do not exclusively remove the possibility of gathering information aside from the aforementioned categories, as characterized by Appellant's use of a neutral and non-committal phrase such as "among other things".

(B) Appellant argues that the DeTore patent "merely provides the individual with general literature on a medical problem", but does not include a messaging means (claim 1, lines 19-20) that provides the respondent with useful recommendations for treatment of health problems and for altering one's lifestyle.

In response, insofar as the claims broadly recite a "messaging means for providing

messages to at least such individual that contain said pre-defined suggestions” (claim 1, lines 19-20; similar language in claim 7, lines 19-20), wherein the pre-defined suggestions are “for improving health and decreasing risk” (claim 1, lines 17-18; similar language in claim 7, lines 19-20), it is respectfully submitted that DeTore’s suggestions on how to improve one’s health in the “TREATMENT” section of the information supplied to an individual suffering from a risk, namely, hypertension (DeTore; cols. 19-20), is sufficient to meet the disputed limitations as claimed. Appellant appears to rely on several exemplary embodiments of “messages” given at pages 15-16 of the specification to show that the “messages” recited in claim 1 are more narrower or more specific than that disclosed by the DeTore reference. However, these exemplary embodiments do not provide a precise definition of the claimed term “messages” in that Appellant’s statements at pages 15-16 of the specification do not exclusively remove the possibility of utilizing any other form of pre-defined messages (e.g., messages not directed to modifying one’s lifestyle), as characterized by Appellant’s use of a neutral and non-committal term such as “may” or “might”, as at, for example, lines 12-15 of page 15 of the instant specification, reproduced hereinbelow:

“...The computer system may suggest in a message that the intake of certain foods be restricted or might suggest that other foods, or vitamins, are beneficial and their intake should be increased.” (emphasis added).

In addition, it is clearly stated at MPEP Section 2183, reproduced hereinbelow:

“If the examiner finds that a prior art element performs the function specified in the claim, and is not excluded by any explicit definition provided in the specification for an

equivalent, the examiner should infer from that finding that the prior art element is an equivalent, and should then conclude that the claimed limitation is anticipated by the prior art element.” (emphasis added).

As the word that are used in the claims (i.e., “messages”) was not explicitly defined in the specification to require the limitations presently argued by Appellant, a reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to disputed terms.

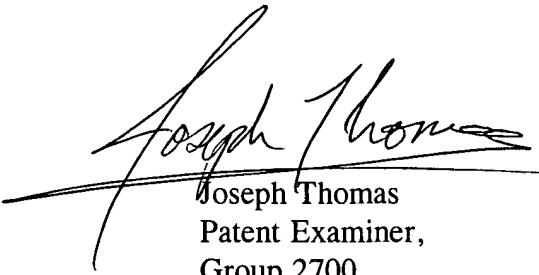
Further, in response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies (i.e., useful recommendations or messages for altering one's lifestyle) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,



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jt
April 23, 1998

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